

cable layers being arranged substantially axially through said slot and substantially radially outside one another, wherein

said plurality of cable layers includes an inner cable layer and an outer cable layer, said inner cable layer being disposed in said slot radially closer to said rotor than said outer cable layer,

a larger share of stands in said inner cable layer are electrically insulated from one another than strands in the inner conductor of said outer cable layer.

31. (New) A high voltage rotating electric machine according to Claim 30, wherein:

said inner cable layer being an innermost cable layer with regard to a radial proximity to said rotor, wherein substantially all of the plurality of strands of the innermost cable layer include an electrical insulation thereabout.

32. (New) A high voltage rotating electric machine according to Claim 30, wherein:

said outer cable layer being an outermost cable layer with regard to a radial proximity to said rotor, substantially none of the plurality of strands of the outermost cable layer include an electrical insulation thereabout.

33. (New) A high voltage rotating electric machine according to Claim 30, wherein:

a portion of strands insulated from one another in the inner conductor of respective of the plurality of cable layers decreases on a cable layer basis as a distance to the rotor increases.

34. (New) A high voltage rotating electric machine according to Claim 30, wherein:

a portion of the plurality of strands configured to have an electrical insulation within each layer of the plurality of cable layers decreases as a distance to the rotor increases on a cable layer by cable layer basis.

35. (New) A high voltage rotating electric machine according to Claim 30, wherein:

a portion of the plurality of strands configured to have an electrical insulation thereabout decreases as a distance to the rotor increases by two or more layers of the plurality of cable layers, where said distance is on a cable layer by cable layer basis.

36. (New) A high voltage rotating electric machine according to Claim 30, wherein:

a plurality of slots are arranged in the stator.

37. (New) A high voltage rotating electric machine according to Claim 30, wherein:

a circuit formed between the stator and rotor is configured for high voltage operation; the plurality of cable layers are configured to have an electric potential developed

therein that increases as a distance between the winding and the rotor increases; and

an insulation thickness of the insulation decreases in at least one of a continuous manner and a stepwise manner as a distance from the rotor increases on a cable layer by cable layer basis.

38. (New) A high voltage rotating electric machine according to Claim 30, wherein:

the insulation comprises a thin electrically insulating envelope.

39. (New) A high voltage rotating electric machine according to Claim 38, wherein:

the thin electrically insulating envelope comprises an insulating lacquer.

40. (New) A high voltage rotating electric machine according to Claim 30, wherein:

a strand that is insulated in the inner cable is comprised of aluminum, and an

insulation on the strand is an aluminum oxide.

41. (New) A high voltage rotating electric machine according to Claim 38, wherein:

a portion of the plurality of strands in said inner cable layer that are insulated are comprised of aluminum and a portion of the plurality of strands in the inner cable layer that are uninsulated are comprised of copper.

42. (New) A high voltage rotating electric machine according to Claim 30, wherein:

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said inner cable layer being an innermost cable layer with regard to a radial proximity to said rotor, substantially all of the plurality of strands are comprised of aluminum; and
said outer cable layer being an outermost cable layer with regard to a radial proximity to said rotor, substantially all of the plurality of strands are comprised of copper.

43. (New) A high voltage rotating electric machine according to Claim 42, wherein:
the winding comprises a flexible electric conductor and a casing configured to contain an electric field generated around the flexible electric conductor.

44. (New) A high voltage rotating electric machine according to Claim 43, wherein:
the casing comprises an insulation system having an inner layer disposed on the flexible electric conductor, a solid insulation layer disposed on the inner layer, and an outer layer disposed on the solid insulation layer, wherein the outer layer is configured to have an electric conductivity higher than that of the solid insulation layer and is connected to a node having at least one of a ground potential and a low voltage potential so as to contain the electric field formed around the flexible electric conductor.

45. (New) A high voltage rotating electric machine according to Claim 44, wherein:
the inner layer is configured to have an electric conductivity lower than the flexible electric conductor and to substantially equalize an electric field formed on an outer surface of the inner layer.

46. (New) A high voltage rotating electric machine according to Claim 44, wherein:
the inner layer, the outer layer and the solid insulation layer are configured to have an essentially equal thermal characteristic.

47. (New) A high voltage rotating electric machine according to Claim 44, wherein:
the inner layer and the outer layer comprise a semiconductor material.

48. (New) A high voltage rotating electric machine according to Claim 44, wherein:

the inner layer and the outer layer are configured to have a resistivity in an inclusive range of $10^{-6}\Omega$ - $1000\Omega\text{cm}$.

49. (New) A high voltage rotating electric machine according to Claim 44, wherein:
the inner layer and the outer layer are configured to have a resistivity in an inclusive range of $10^{-3}\Omega\text{cm}$ - $1000\Omega\text{cm}$.

50. (New) A high voltage rotating electric machine according to Claim 44, wherein:
the inner layer and the outer layer are configured to have a resistivity in an inclusive range of $1\Omega\text{cm}$ - $500\Omega\text{cm}$.

51. (New) A high voltage rotating electric machine according to Claim 44, wherein:
the inner layer and the outer layer are configured to have a resistance in an inclusive range of $50\mu\Omega/\text{m}$ - $5\text{M}\Omega/\text{m}$.

52. (New) A high voltage rotating electric machine according to Claim 44, wherein:
the solid insulation layer and at least one of the inner layer and the outer layer comprise a polymeric material.

53. (New) A high voltage rotating electric machine according to Claim 44, wherein:
the solid insulation layer, the inner layer and the outer layer are configured to ensure adherence upon flexing and temperature change.

54. (New) A high voltage rotating electric machine according to Claim 44, wherein:
the solid insulation layer, the inner layer and the outer layer comprise materials with high elasticity.

55. (New) A high voltage rotating electric machine according to Claim 44, wherein:
the solid insulation layer, the inner layer and the outer layer are comprised of materials with a substantially equal E-modulus.

56. (New) A high voltage rotating electric machine according to Claim 44, wherein:

the solid insulation layer, the inner layer and the outer layer are comprised of materials with a substantially equal thermal expansion coefficients.

57. (New) A high voltage rotating electric machine according to Claim 44, wherein:
the inner layer is configured to be in electrical contact with the flexible electric conductor.

58. (New) A high voltage rotating electric machine according to Claim 44, wherein:
the flexible electric conductor comprises a plurality of strands, and
at least one portion of at least one of the plurality of strands is uninsulated and
configured to be in contact with the inner layer.

59. (New) A high voltage rotating electric machine according to Claim 42, wherein:
the winding is configured to carry voltages greater than 10 kV.

60. (New) A high voltage rotating electric machine according to Claim 59, wherein:
the winding is configured to carry voltages greater than 36 kV.

61. (New) A high voltage rotating electric machine according to Claim 60, wherein:
the winding is configured to carry voltages greater than 72.5 kV.

62. (New) A high voltage rotating electric machine according to Claim 42, wherein:
the winding is configured to be connected to a voltage greater than 10 kV.

63. (New) A high voltage rotating electric machine according to Claim 62, wherein:
the winding is configured to be connected to a voltage greater than 36 kV.

64. (New) A high voltage rotating electric machine according to Claim 63, wherein:
the winding is configured to be connected to a voltage greater than 72.5 kV.

65. (New) A high voltage rotating electric machine comprising:
a stator;

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a winding that includes a cable having a flexible electric conductor, an inner semiconductor layer on the flexible electric conductor, a solid insulation layer on the inner semiconductor layer, and an outer semiconductor layer on the solid insulation layer; means for minimizing eddy current losses; and means for containing high voltage electric field in the cable.

REMARKS

Favorable consideration of this Application as presently amended is respectfully requested.

Claims 30-65 are active in the present Application; Claims 1-29 having been canceled and Claims 30-65 added by way of the present Preliminary Amendment. The new claims have been drafted in a manner consistent with U.S. practice. It is therefore believed that no issues of new matter have been raised.

The present document is one of a set of patent applications containing related technology as was discussed in "response to petition under 37 C.F.R. §1.182 seeking special treatment relating to an electronic search tool, and decision on petition under 37 C.F.R. §1.183 seeking waiver of requirements under 37 C.F.R. §1.98," filed in the holding application (U.S. Patent Application No. 09/147,325). Consistent with this decision, a copy of the decision is filed herewith. Also, an Information Disclosure Statement is filed herewith including a PTO Form 1449 with references that are included as part of the specially-created official digest in class 174. It is believed that submission of these materials and the reference to the holding application (Serial No. 09/147,325) is sufficient for the present Examiner to consider the references in the holding application, consistent with the decision.

Accordingly, examination on the merits of Claims 30-65 is believed to be in order,
and an early and favorable action is respectfully requested.

Respectfully submitted,

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